June 10, 1993

DOCKET FILE COPY ORIGINAL

Ms. Donna Searcy
Secretary
Federal Communications Commission
1919 M. Street, N.W.
Washington, D.C.   20554

RE: Ex Parte Presentation, CC Docket No. 92-77

Dear Ms. Searcy:

This letter is in response to a recent request by the Commission's staff for updated data on the cost to provide Billed Party Preference ("BPP").   In the above-captioned Notice of Proposed Rulemaking ("NPRM"), the Commission tentatively approved implementing interLATA BPP.   With its Comments and Reply Comments, MessagePhone explained that its line-side technology is available to enable swift, cost-effective implementation of BPP for calls from public pay telephones.   This technology currently is being marketed to the Regional Bell Operating Companies ("RBOCs").

The price of MessagePhone's line-side technology has decreased.[1] In addition, MessagePhone and Hewlett-Packard recently have begun to jointly market a trunk-side architecture with the capability to provide BPP on all interLATA operator services telephone calls.   The architecture is called the "TOPS-Surround" architecture.   In this letter, MessagePhone will demonstrate that the TOPS-Surround architecture can be implemented to provide BPP for a cost that is significantly below the costs quoted by the Regional Bell Operating Companies ("RBOCs").   The cost of implementing the TOPS-Surround architecture also will be less than the cost of implementing BPP with MessagePhone's line-side architecture -- that is, if the RBOCs choose to utilize the line-side architecture to offer only BPP and none of the numerous other new services and products to their customers.[2]

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[1]   See MessagePhone Comments at 24-26, MessagePhone Reply Comments at 29.

[2]   MessagePhone Comments at 22-23, Exhibit B and MessagePhone Reply Comments at 23-24, Exhibits B and E for a list and description of the services and a business plan.

I. THE LINE-SIDE ARCHITECTURE

MessagePhone's line-side architecture consists of three components -- an in-line intelligent platform ("front end processor"), a remote management system ("RMS"), and a network computer platform ("voice interface platform"). The front end processor is the nucleus of the architecture and performs a wide variety of switching and monitoring functions.[3] The line-side architecture also is called the Payphone Gateway Platform ("PGP") architecture (see attachment).

The costs for the line-side architecture are divided into two categories -- component hardware/software and application software. The component hardware and software costs for the line-side architecture currently are $400 per line. The BPP application software has been reduced to $85. The software for the remaining applications is $250. These additional applications also may be unbundled and the application software priced separately.

The total cost for a complete product (including BPP and non-BPP application software) is $735 per line ($400 + $85 + $250). The cost of the line-side architecture for BPP only is $485 per line ($400 + $85). Assuming that a LEC with approximately 150,000 pay telephones purchased only the BPP software and chose not use the architecture to offer other services, the total cost to implement BPP would be $72,750,000. However, assuming that the LEC with 150,000 pay telephones purchased the complete application software package and was able to allocate the component hardware/software costs between the various services, the total cost to implement BPP with this architecture could be as low as $13,000,000 (150,000 X $85).[4] With a sizable product rollout of the line-side architecture, MessagePhone and its licensees also would offer additional cost reductions (quantity discounts).

If MessagePhone's line-side technology is utilized, many of the costs to implement BPP believed necessary by many of the parties commenting on the NPRM would be eliminated:

1. Negates Additional Automated Alternate Billing System ("AABS") and Operator Services Switch ("OSS") Expenses -- The front end processor and RMS perform all AABS and most OSS functions on interLATA (and intraLATA) "O" calls originating from pay telephones.

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[3] MessagePhone Comments at 18-22.

[4] The example assumes that eight major services are implemented and one-eight of the component hardware/software costs are allocated to BPP.

2.   <u>Requires Minimal Additional Operator Expense</u> -- The front
        end processor and RMS automate most BPP transactions.   As
        reported   by   Ameritech,   90%   of   calling   card   calls   are
        mechanized and 70% of collect and third party billed calls
        currently   are   mechanized.[5]   Approximately   the   same
        percentage of interLATA telephone calls also are mechanized.
        The BPP function of these calls will be executed by the
        front end processor and then the caller and call information

A.   Advantages of Using the Line-Side Architecture

MessagePhone's line-side architecture gives the LECs several distinct advantages, including additional services, low cost, and an equal access solution for public telephones.   In its Comments and Reply Comments, MessagePhone listed numerous basic, enhanced, gateway and maintenance services, available with the line-side architecture, that simply cannot be offered effectively for coin pay telephones from any other location in the public network. Most of the services presently are not offered by any local exchange carriers ("LECs"), including the RBOCs.   These new services would benefit consumers and enhanced service providers and would provide LECs with substantial new revenue opportunities.

If only some of these additional services are implemented, the line-side architecture would allow LECs to implement BPP with minimal initial and capital expense.   In conjunction with roll-out prices, and correct allocation of initial and capital expenses, BPP could cost as low as $85 per line.   As stated supra, for a LEC with 150,000 pay telephones, the initial and capital costs for BPP would be approximately $13,000,000.

MessagePhone's line-side architecture provides BPP for 91% of the operator services calls originating on public telephones.[8] Unlike residential and business telephones, true equal access currently is not available for public telephones.   InterLATA billed party preference for public pay telephones would effectively fulfill the decade-old promise of equal access.

B.   Disadvantages of the Line-Side Architecture

MessagePhone realizes that the Commission cannot require the RBOCs to offer new products and services to their customers or provide their pay telephones with new cost-saving maintenance services.   If the RBOCs choose not to offer any of the twenty-two services available with the line-side architecture, then the entire cost of the line-side architecture must be allocated to BPP.   The lopsided allocation drives the cost of BPP artificially high.   However, MessagePhone has demonstrated that even the artificially high cost can be justified by the consumer benefits of BPP and can be recovered with an equitable return for services performed.[9]

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[8]   MessagePhone Reply Comments at 8-15.   NYNEX Comments at note 31.

[9]   MessagePhone demonstrated that a fair compensation for performing the operator services functions (integral to BPP) would provide enough revenues for a very rapid return on investment.   See MessagePhone Comments at 26-27 and MessagePhone Reply Comments at 19-22, Exhibit C.

The line-side architecture does not provide BPP on all operator services calls. However, as stated in the proceeding section, it does provide BPP on approximately 91% of the operator services calls originating on public telephones where equal access currently is unavailable. Public telephones are the very ones where BPP and equal access are badly needed by consumers.

II. THE TOPS-SURROUND ARCHITECTURE

The TOPS-Surround architecture consists of intelligent trunk monitoring devices, voice and data processors, active SS7 monitors and interfaces, and application software. Because it utilizes distributed intelligence and functionality, the design of the architecture actually is somewhat similar in concept to the advanced intelligent network ("AIN").[10] The TOPS-Surround architecture initially was developed to provide automatic message delivery services ("AMDS") and information gateway services for the LEC's operator services traffic.

The TOPS-Surround components can be installed as part of the Operator Services Network. As with the RBOCs' solution, all interLATA operator calls would have to be trunked to the LEC's Operator Services Network. The TOPS-Surround can provide its own AABS functionality or it can utilize the LEC's preexisting AABS units. This architecture has the advantage over switch-based solutions because it also can provide AMDS and other new services.

The components of the TOPS-Surround architecture do not have to be located contiguous to the operator services switch. The TOPS-Surround components actually can be installed at several points within the LECs' local exchange networks. It could be more cost effective to locate the TOPS-Surround components with the LECs' Equal Access Tandem Switches. Only calls that require live operator assistance would be trunked to the OSS. In addition, the LECs' existing AABS units would not be utilized on interLATA telephone calls and these units would not have to be upgraded. Regardless of where the components are located, the TOPS-Surround architecture has the capability of "painting" the live operator workstation screen with the call information.

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[10] At present, MessagePhone must refrain from describing the details of the TOPS-Surround architecture. Even though patents on the TOPS-Surround architecture are pending, MessagePhone's policy is not to publicly disclose trade secrets until the patents actually are granted. MessagePhone is willing to disclose additional information describing the TOPS-Surround architecture to parties that have entered into a non-disclosure relationship.

A. The TOPS-Surround Architecture Reduces the Cost of BPP

The parties to this docket have identified various categories of costs. Unfortunately, not all of the RBOCs provided cost details. Many of the costs described in this section would decrease or be eliminated with the TOPS-Surround architecture.

1. Development of AABS functionality and TOPS switch upgrades -- The RBOCs' estimates range from $11.4 million to $72 million per RBOC. This cost could be eliminated with the deployment of the TOPS-Surround architecture.

2. Operator Costs -- The RBOCs' estimates range for $13 million to $31 million per RBOC ($3.8 million for pay telephones only). Because such a large percentage of the calls are automated by the TOPS-Surround architecture, MessagePhone believes operator costs would be minimal ($3 million to $8 million initial and capital costs).

3. Deployment of SS7 from the Access Tandem and OSS to LIDB -- The RBOCs' estimates range from $2 million to $7.5 million per RBOC. The TOPS-Surround architecture would still require deployment of SS7, though, because of its centralized location, the cost probably would be reduced.

4. End office Upgrades -- Only US West reported the need for end office upgrades ($68 million). It is MessagePhone's understanding that only non-equal access offices would require these upgrades.

9. <u>Non-Capital Annual Costs</u> -- The RBOCs' estimates range from $6.8 million to $23 million per RBOC. Because of automation with the TOPS-Surround architecture, non-capital annual costs would be reduced to a range of $6 million to $8 million.

The costs of the TOPS-Surround architecture would be approximately $35 million to $40 million per RBOC. If the TOPS-Surround is able to utilize a LEC's existing AABS capability, the cost decreases to $25 million to $30 million. MessagePhone estimates that other expenses associated with the TOPS-Surround architectural solution could include:

- Customer notification - $5 million
- Trunking - $2 to $3 million
- Additional Operator Costs - $3 to $5 million
- Deployment of SS7 - $4 to $6 million

With the TOPS-Surround architecture, MessagePhone estimates that total initial and capital costs to implement BPP for all operator services calls will be $49 to $59 million per RBOC. All annual non-capital expenses would be $6 to $8 million. The RBOCs' estimates, based on upgrading existing technology, ranged from $52 million to $145 million and averaged $100 million (capital and initial costs).[11] The use of the TOPS-Surround architecture would lower costs to an average of $41 to $51 million per RBOC.

The TOPS-Surround is capable of providing other services (e.g., AMDS). If these services also are implemented, part of the cost of the TOPS-Surround architecture could be allocated to the other services.[12] Accordingly, the cost of BPP could decrease by an

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[11]   The RBOCs estimated the following initial expenses for implementing OSS-based BPP in millions):

Ameritech	$ 52.5
NYNEX	53.9
Pacific Tel	103.0
Bell Atlantic	110.0
US West	113.0
SWBT	127.0
BellSouth	145.0

See: Ameritech Comments at 16; NYNEX Comments at 6-12; Pacific Tel Comments at 18-20; Bell Atlantic Comments at Attachment A; US West Comments at 4-7; SWBT Comments at 10; BellSouth Comments at 12. The average initial and capital expense for an RBOC is $100 million.

[12]   To offer additional services on both interLATA and intraLATA calls, the LEC may have to install the TOPS-Surround components both at the equal access tandem and at the OSS. However, the additional equipment costs should be completely allocated to the additional services and not to BPP.

additional $10 to $15 million per PROC. It is highly probable

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hardware and software upgrades in order to offer services on intraLATA calls.

III. Conclusion

The opponents have characterized BPP as a service that consumers do not want and that costs too much. In its Comments, Reply

Payphone Gateway Platform (PGP)
Centralized Expandable Intelligent Platform
Architectural/Functional Overview

Remote Management System (RMS)
- Billing Integration
- Database Management
- Real Time Operations and Diagnostics
- 4GL Reporting Language
- Centralized Debit Card "Banking" Integration and Management
- Fraud Detection/Prevention
- Instant Integration into TOPS operator center for call processing help or debit card refunds

SS7 or X.25 to LIDB, TOPS, operator sceen and/or other databases

RMS

Voice Interface Platform

FEP

DS-0, 9600 Baud
DS-0, DS-1,
T-1 Prime, MB-1
or Standard Coin Line

C.O. SWITCH

········· Data

———— Voice

Universal Payment Phone
- Coin
- Magnetic Card
  - Debit
  - Credit

FEP **Front End Processor**
- Line Monitor
- Rating
- Gateway
- Intelligent Prompts
- Answer Supervision
- Coin Handling/Accounting
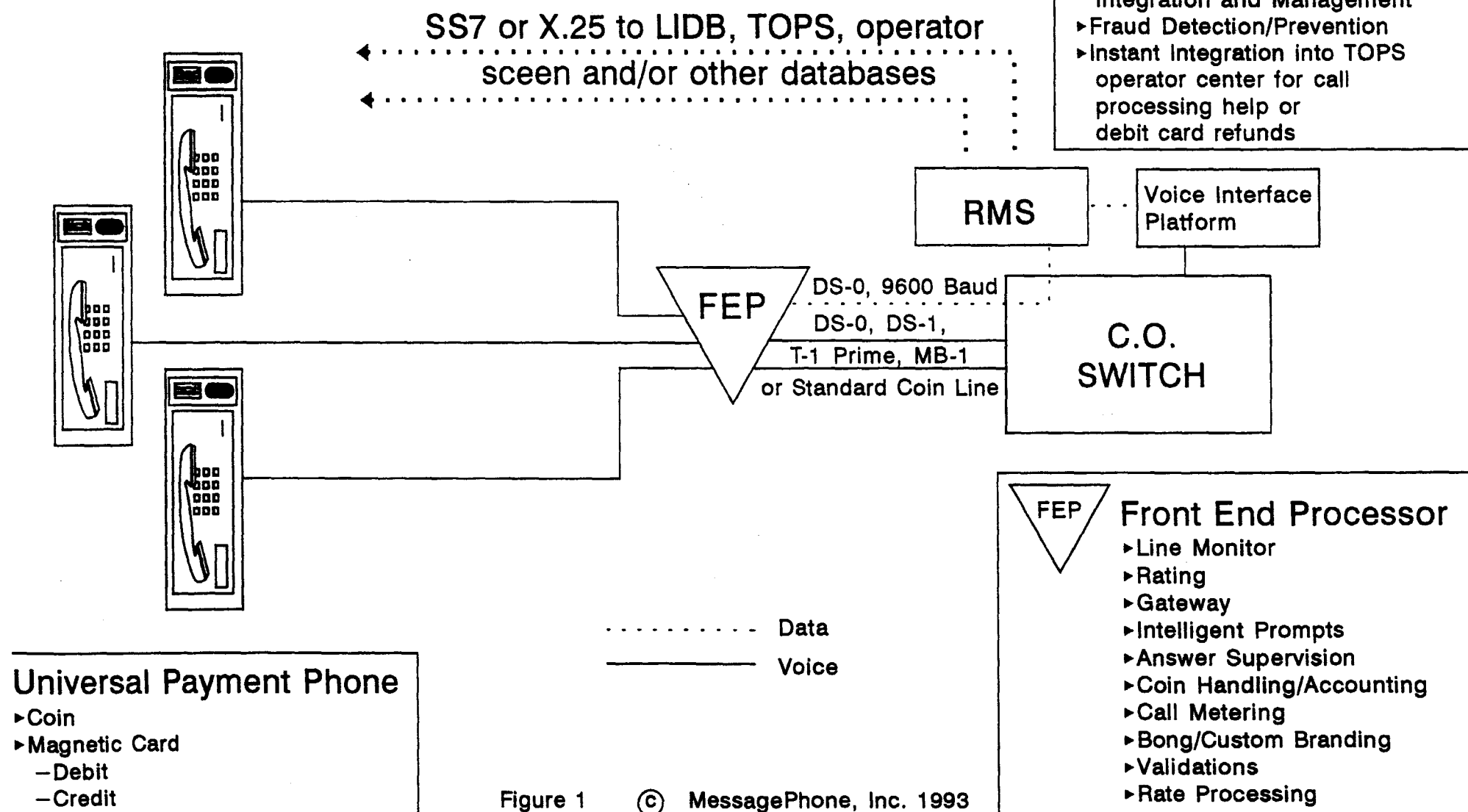- Call Metering
- Bong/Custom Branding
- Validations
- Rate Processing

Figure 1   © MessagePhone, Inc. 1993